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ABSTRACT

The paper describes a Virginia career education project tested in 1974-5 at 10 field sites with sixth through ninth grade students. The simulation-based curriculum, Careers and You, takes a clusters approach to career orientation. Designed for a total school year, the curriculum repeats its sequence of phases so that each is emphasized twice. The phases are: (1) self, (2) work mode, (3) occupational clusters, and (4) educational planning. Once students have identified personality characteristics in general which have a bearing upon work selection, and their own in particular, they look intensely at the work modes appropriate to various personalities, guided by Holland's six work environments: realistic, social, creative, enterprising, intellectual, and conventional. The second and third phases of the course involve youth in simulating each work mode; the third phase uses the 15 USOE occupational clusters as a vehicle and involves youth in discovering the frequency of the various work modes throughout the world of work. Time is given at midyear for educational planning, and during the final weeks of the course, long-term goals and alternate career paths are identified. Base-line and process data have been gathered; the project's third year will be spent in product evaluation. (AJ)

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# CAREER DEVELOPMENT THEORY AND CURRICULUM DEVELOPMENT

A

PAPER

PRESENTED

BY

RALPH RESSLER, PH.D.

AMERICAN EDUCATIONAL RESEARCH ASSOCIATION

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U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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# INTRODUCTION

VIRGINIA, LIKE MANY OTHER STATES IN THE EARLY 70'S, TOOK A LONG TERM LOOK AT ITS EDUCATIONAL NEEDS. RECOMMENDATIONS WERE MADE IN THE FORM OF "STANDARDS OF QUALITY." ALTHOUGH VIRGINIA DID NOT FORMALLY ADOPT CAREER EDUCATION PER SE, SEVERAL OF THE GOALS WHICH APPEARED IN THE STANDARDS OF QUALITY WERE ADDRESSED TO IT; FOR INSTANCE, THAT EVERY YOUTH LEAVING THE EDUCATIONAL SYSTEM IN VIRGINIA HAVE POTENTIAL FOR EMPLOYMENT AND/OR HIGHER EDUCATION. PROGRAM STANDARD NUMBER FIVE, ADDRESSED TO VOCATIONAL EDUCATION, STATES,

> EACH SCHOOL DIVISION SHALL PROVIDE...TRAINING FOR EMPLOYMENT BY STUDENTS PLANNING TO ENTER THE WORLD OF WORK OR IT SHALL DEVELOP A PLAN ACCEPTABLE TO THE BOARD OF EDUCATION BY JUNE THIRTIETH, NINETEEN HUNDRED SEVENTY THREE TO PROVIDE SUCH TRAINING.

THE DIVISION OF VOCATIONAL EDUCATION RESPONDED WITH "CONTINUING OBJECTIVES" WHICH IN PART STATE THAT,

> BY JUNE 30, 1975 AN ACROSS THE BOARD VOCATIONAL ORIENTATION PROGRAM WILL BE DEVELOPED THROUGH RESEARCH...
>
> BY AUGUST 1977 THE VOCATIONAL ORIENTATION PROGRAM WILL BE EVALUATED AND CURRICULUM GUIDES DISSEMINATED BY THE DIVISION OF VOCATIONAL EDUCATION.

THIS DIRECTION TOWARD A SELF-CONTAINED ORIENTATION COURSE WAS FAR DIFFERENT FROM OTHER STATES IN THAT WHILE VIRGINIA SOUGHT TO ISOLATE AN EDUCATIONAL EXPERIENCE AS "CAREER EDUCATION," MOST OTHERS UNDERTOOK ITS ASSIMILATION INTO THE ONGOING CURRICULUM. (JUST WHEN THE TERM "CAREER" ORIENTATION, RATHER THAN "VOCATIONAL" ORIENTATION, BEGAN TO BE USED IS NOT CLEAR, BUT SINCE IT WAS CONCEPTUALIZED TO BE

A SIXTH OR SEVENTH GRADE EFFORT, THE TERM "VOCATIONAL" WAS LESS THAN ACCURATE.)

## PROJECT DESCRIPTION

THE CLUSTERS APPROACH TO CAREER ORIENTATION WAS THUS GIVEN LIFE AS A PROJECT IN THE SUMMER OF 1974. DURING ITS FIRST YEAR, CACO WAS TO (1) DEVELOP THE BODY OF KNOWLEDGE TO IMPART TO STUDENTS, (2) AUTHOR THE INSTRUCTIONAL SOFTWARE FOR BOTH TEACHERS AND STUDENTS ENABLING IT TO BE TAUGHT, AND (3) PRODUCE A "RATIONALE AND STRUCTURE" DOCUMENT PHILOSOPHICALLY DESCRIBING AND SUPPORTING THE APPROACH TAKEN. THESE WERE INDEED ACCOMPLISHED IN 1974-75. IN ADDITION, TEN FIELD TEST SITES WERE IDENTIFIED AND THE 20 TEACHERS BROUGHT TO CAMPUS FOR IN-SERVICE WORK DURING THAT YEAR.

FIELD TEST SITES WERE SELECTED TO BE REPRESENTATIVE OF GEOGRAPHICAL AREAS OF THE STATE AND TO INCLUDE RURAL/URBAN SCHOOLS AND SCHOOLS HAVING DIFFERENT ETHNIC BALANCES. THE CENTERS WERE ALSO CHOSEN TO REPRESENT VARIOUS SCHOOL ORGANIZATIONAL STRUCTURES. THE LATTER HAS PERMITTED FIELD TESTING WITH 6TH, 7TH, 8TH, AND 9TH GRADE STUDENTS IN ELEMENTARY, MIDDLE, JUNIOR HIGH, AND HIGH SCHOOLS.

THE TEACHERS THEMSELVES REPRESENT ALL THE VOCATIONAL SERVICE AREAS AND ALL ACADEMIC AREAS EXCEPT MUSIC AND ART. FOUR ARE ELEMENTARY TEACHERS. SIX HAVE MASTER'S DEGREES. ONE IS A GUIDANCE COUNSELOR WHO HAD NOT BEEN IN THE CLASSROOM FOR SEVERAL YEARS. THE TEACHERS

RECEIVED APPROXIMATELY 50 HOURS OF PREPARATION WITH GRADUATE CREDIT. ALONG WITH A STAFF OF EIGHT, ALSO WITH DIVERGENT BACKGROUNDS, THESE TEACHERS PROVIDED BROAD-BASED INPUT AS TO THE SELECTION OF SPECIFIC LEARNING ACTIVITIES AS WELL AS APPROPRIATE TEACHING METHODOLOGY.

THE SIMULATION-BASED CURRICULUM WHICH RESULTED, CAREERS AND YOU, WHILE BEING DESIGNED FOR A TOTAL SCHOOL YEAR, IS CYCLICAL IN NATURE, REPEATING A PARTICULAR SEQUENCE IN EMPHASIS TWICE. IN BOTH, SELF IS INITIALLY EMPHASIZED, THEN WORK MODE, OCCUPATIONAL CLUSTER, AND FINALLY EDUCATIONAL PLANNING. IN THE FIRST PHASE STUDENTS FOCUS UPON THEMSELVES--THEIR UNIQUENESS IN TERMS OF HERITAGE, ATTITUTDES, ABILITIES, INTERESTS, AND VALUES. DECISION-MAKING IS AN INTEGRAL PART OF THIS PHASE OF THE COURSE. AS THE SECOND EMPHASIS BEGINS, THE EMPHASIS UPON SELF BEGINS TO WANE UNTIL WORK MODE OR STYLE BECOMES THE FOCAL POINT OF ALL ACTIVITIES.

ONCE STUDENTS HAVE IDENTIFIED PERSONALITY CHARACTERISTICS IN GENERAL WHICH HAVE A BEARING UPON WORK SELECTION, AND THEIR OWN IN PARTICULAR, THEY LOOK INTENSELY AT THE WORK MODES WHICH ARE APPROPRIATE TO VARIOUS PERSONALITIES. THE SIX (6) WORK ENVIRONMENTS CITED BY HOLLAND[1] IN HIS WORK AS AN OCCUPATIONAL PSYCHOLOGIST ARE BEING USED AS A GUIDE FOR THIS PHASE. THEIR TITLES HAVE BEEN CHANGED SLIGHTLY TO BETTER COMMUNICATE WITH EDUCATORS, BUT THEY REPRESENT THE REALISTIC, SOCIAL, CREATIVE, ENTERPRISING, INTELLECTUAL, AND CONVENTIONAL ENVIRONMENTS NOTED IN HOLLAND'S WORK SINCE 1955. STUDENTS "FIND

THEMSELVES" AS IT WERE IN EACH. THE "SELF DIRECTED SEARCH" INSTRUMENT, DEVELOPED BY DR. HOLLAND AND USED WITH OLDER PERSONS, IS NOT USED AS SUCH SINCE IT WAS FEARED THAT A STANDARDIZED INVENTORY USED WITH STUDENTS THIS YOUNG WOULD BE MISLEADING, IMPLYING TOO MUCH DIRECTION TO STUDENTS.

THE SECOND AND THIRD PHASES OF THE COURSE INVOLVE YOUTH IN SIMULATING EACH WORK MODE. SITUATIONS ARE AS REAL AS POSSIBLE; REAL TOOLS AND INSTRUMENTS ARE USED. EACH ACTIVITY IS DIRECTLY ASSOCIATED WITH A WORK ENVIORNMENT OR WORK MODE. A THEME PROVIDES THE CONTEXT FOR EACH SIMULATION ACTIVITY, RELATING ONE ACTIVITY TO THE NEXT, RATHER THAN THEIR BEING DONE IN ISOLATION ONE FROM ANOTHER. ALL STUDENTS HAVE SEVERAL OPPORTUNITIES TO SIMULATE EACH WORK MODE.

USING THE 15 USOE OCCUPATIONAL CLUSTERS AS A VEHICLE, THE THIRD PHASE INVOLVES YOUTH IN DISCOVERING THE FREQUENCY OF THE VARIOUS WORK MODES THROUGHOUT THE WORLD OF WORK. DURING THIS PHASE, WHICH IN TERMS OF TIME IS THE LONGEST, VARIOUS LEARNING ACTIVITIES, STILL SIMULATION-BASED AND STILL REPRESENTATIVE OF MODES, ARE DONE IN A CLUSTER CONTEXT. OUT-OF-SCHOOL EXPERIENCES AND AVOCATIONS WHERE ADDITIONAL OPPORTUNITIES EXIST TO TRY OUT THE MODES ARE ALSO NOTED.

THE LAST PHASE OF THE COURSE DEALS WITH EDUCATIONAL PLANNING. TIME IS PROVIDED AT MIDYEAR TO WORK ON THE SELECTION OF NEXT YEAR'S PROGRAM, WHICH INCLUDES CAREER-RELATED EXPLORATORY COURSES.

DURING THE FINAL TWO TO THREE WEEKS OF THE COURSE, EDUCATIONAL PLANNING IS DEVOTED TO IDENTIFYING LONGER-TERM GOALS AND THE ALTERNATE CAREER PATHS AVAILABLE TO ENTER SEVERAL TENTATIVE CAREERS. THE LIMITATIONS, ASSETS, AND LIABILITIES ASSOCIATED WITH BOTH THE MEANS OF PREPARATION AS WELL AS THOSE COURSES TENTATIVELY IDENTIFIED BY STUDENTS ARE INVESTIGATED. THE STUDENTS' PRESENT LIMITATIONS THEMSELVES ARE NOTED.

THUS THE COURSE TAKES YOUTH THROUGH SELF, MODE, CLUSTER, AND EDUCATIONAL PLANNING PHASES TWICE. THE FREQUENCY OF OBSERVATION, PEER GUIDANCE, AND OTHER OPPORUNITIES TO PURSUE ANSWERS TO CAREER SELECTION QUESTIONS ON AN INDIVIDUAL BASIS INCREASES THROUGHOUT THE COURSE. THE AVAILABILITY OF "HARD" VOCATIONAL INFORMATION AND EXPERIENCES ALSO INCREASES,PEAKING IN THE SECOND HALF OF THE COURSE.

THE LEARNING EXPERIENCES THEMSELVES ARE SUPPORTED BY A TEACHER'S GUIDE AND STUDENT ACTIVITY BOOK. ALL MATERIALS USED THROUGHOUT THE COURSE ARE PAID FOR BY THE PROJECT ITSELF. EACH SCHOOL HAS A "SCHOOL FUND" TO MEET EMERGENCY-TYPE NEEDS DURING THE FIELD TEST. SOME 1000 STUDENTS ARE ABOUT TO COMPLETE SUCH FIELD TESTING AT A COST OF ABOUT $2.50 PER STUDENT FOR HARDWARE AND SUPPLIES. THE EVENTUAL COST OF THE SOFTWARE ITSELF HAS NOT BEEN PROJECTED AS THE OPTIMUM FORMAT HAS NOT BEEN DETERMINED AND THE REAL POSSIBILITY OF PUBLISHER SUPPORT EXISTS.

STUDENTS HAVE BEEN INVOLVED IN A DIVERSE NUMBER OF ACTIVITIES, THE VAST MAJORITY OF WHICH HAVE BEEN SIMULATION EXPERIENCES. AS HAS BEEN NOTED, THE COURSE BEGINS WITH "SELF" ORIENTED ACTIVITIES SUCH AS FINGERPRINTING, THE IDENTIFICATION OF LIKES AND DISLIKES, OF ABILITIES AND INTERESTS, AND IN REVIEWING CASE STUDIES. A "SELF-PROFILE" IS, THEREFORE, GENERATED BY EACH STUDENT. AS WORK STYLES OR MODES ARE INTRODUCED, STUDENTS UNDERTAKE A SERIES OF EXPERIENCES DESIGNED TO GIVE THEM AN OPPORTUNITY TO TRY OUT EACH. THEY MANIPULATE (MECHANICAL), DEBATE (ENTERPRISING), PROBLEM SOLVE (INVESTIGATIVE), DESIGN (CREATIVE), SORT (CONVENTIONAL), AND HELP OTHERS (SOCIAL). ONCE STUDENTS GRASP THESE WORK MODES, ADDITIONAL OPPORTUNITIES TO EXPERIENCE EACH IS PROVIDED--NOW WITHIN EACH OCCUPATIONAL CLUSTER. THESE ACTIVITIES ARE RELATED ONE TO ANOTHER BY VIRTUE OF A THEME--DEVELOPING A PLANNED COMMUNITY. STUDENTS, THEREFORE, PLAN, BUILD, DISCUSS, DESIGN, CREATE, PLAN AND SO FORTH WITH AN OVERT END IN MIND--THE PLANNING OF A COMMUNITY. BUT IN THE PROCESS STUDENTS ARE AWARE OF WHY THEY ARE DOING THESE VARIOUS ACTIVITIES. SUBJECT MATTER, THEREFORE, IS NOT STRESSED; HOWEVER, STUDENTS ARE ENCOURAGED TO PURSUE THEIR INTERESTS AND THERE HAS BEEN EVIDENCE OF "SPILLOVER" TO OTHER COURSES. EACH OF THE 15 USOE CLUSTERS IS REPRESENTED: AGRICULTURE, BUSINESS, COMMUNICATIONS, ETC. AS WELL AS THE 6 WORK MODES. SERVICES ARE EMPHASIZED DURING THE FIRST SEMESTER.

DURING THE PLANNING STAGE, WHICH FOLLOWS THE EMPHASIS UPON CLUSTERS, STUDENTS TALK WITH COUNSELORS, RESEARCH AND OBSERVE EXPLORATORY COURSES, AND HAVE OTHER OPPORTUNITIES TO LEARN ABOUT SUCH COURSES AS WELL AS OTHER SCHOOL EXPERIENCES RELATED TO PARTICULAR WORK MODES.

THE SECOND HALF OF THE COURSE FINDS STUDENTS REPEATING THE SEQUENCE. FIRST, "SELF" ORIENTED ACTIVITIES ARE DONE, ALTHOUGH FOR A SHORTER PERIOD OF TIME. VALUES, APTITUDES, HEREDITY AND ENVIRONMENT, AND DECISION MAKING ARE ALL PURSUED. SPECIFIC MODE ACTIVITIES ARE DIFFERENT, BUT STILL REPRESENTATIVE OF THE SIX WORK MODES, OF COURSE. THE THEME IS RESUMED AS CLUSTERS ARE EMPHASIZED. GOODS PRODUCTION, AS OPPOSED TO SERVICES, IS STRESSED. AT THE END OF THIS PHASE THE CLASS IS GIVEN A TOWN CHARTER FOR THEIR NEW COMMUNITY AND STUDENTS UNDERTAKE THE TERMINAL EDUCATIONAL PLANNING PHASE OF THE COURSE WHICH IS RATHER EXTENSIVE WHEN COMPARED TO THE FIRST. DURING THIS TIME STUDENTS LEARN OF PREPARATORY AGENCIES AND OPPORTUNITIES INCLUDING THE VOCATIONAL/TECHNICAL CENTER, COLLEGE AND UNIVERSITY TRAINING, THE MILITARY, APPRENTICESHIP, ADULT EDUCATION, AND OTHERS. IN PARTICULAR, STUDENTS IDENTIFY THEIR PRESENT LIMITATIONS AND LEARN ABOUT ALTERNATE CAREER PATHS. THEY SPEND TIME INDIVIDUALLY INTERVIEWING CAREER MODELS, RESEARCHING, AND OBSERVING PERSONS IN VARIOUS TASKS AS MUCH AS POSSIBLE.

AS A RESULT OF THESE EXPERIENCES, IT IS HOPED A STUDENT WILL BE ABLE TO

(1) PERCEIVE HIS/HER WORK-RELATED PERSONALITY CHARACTERISTICS;

(2) RECOGNIZE THAT THERE IS A RELATIONSHIP BETWEEN PERSONALITY, "STYLE" OF DOING THINGS, AND OCCUPATIONAL SELECTION;

(3) IDENTIFY AND SEEK OUT APPROPRIATE CAREER-RELATED SCHOOL EXPERIENCES;

(4) IDENTIFY SIMILAR OUT-OF-SCHOOL EXPERIENCES CONGRUENT WITH HIS/HER PERSONALITY;

(5) PERCEIVE THE WORLD OF WORK AS OFFERING OPPORTUNITIES TO SATISFY PERSONAL NEEDS, RATHER THAN STEREOTYPED CONCEPTS OF SPECIFIC JOBS AND/OR CLUSTERS; AND

(6) IDENTIFY THE RELATIONSHIP BETWEEN VOCATION AND AVOCATION IN SATISFYING "SELF" NEEDS.

OUR EVALUATIVE EFFORTS, OF COURSE, WILL ENABLE US TO DETERMINE WHETHER SUCH RESULTS ARE BEING ACHIEVED OR NOT.

# EVALUATION

EARLY IN THE PROJECT A THIRD PARTY DESIGNED THE EVALUATION PLAN FOR THE PROJECT. IT CONSISTED OF GATHERING BASE-LINE DATA, "PROCESS," AND "PRODUCT" EVALUATION.

## BASE-LINE DATA

BASE-LINE DATA WAS GATHERED CONSISTING OF INFORMATION ABOUT THE SCHOOL, COMMUNITY, STUDENTS, AND TEACHERS. THE LOCALE, SIZE, ETHNIC BALANCE, POPULATION BASE, MAINSTAY INDUSTRIES, AND MEDIAN INCOME OF FAMILIES WHOSE CHILDREN ATTEND THE SCHOOL WERE SOME DATA SOUGHT. INFORMATION WAS ALSO ELICITED AS TO THE SCHOOL'S ORGANIZATION. VIRGINIA'S SCHOOL ORGANIZATION IS MOST OFTEN BASED UPON AVAILABLE FACILITIES RATHER THAN A RIGID K THROUGH 6, 7-9, 10-12 OR OTHER ORGANIZATIONAL ARRANGEMENT. THE BASE-LINE DATA GATHERED WILL BE USED TO TEMPER THE PROCESS AND PRODUCT EVALUATION RESULTS.

## PROCESS EVALUATION

THE INDIVIDUAL LEARNING ACTIVITIES, ONCE GENERATED BY THE STAFF, WERE REVIEWED BY TEACHERS AS WELL AS BY ONE OF THE THREE CACO ADVISORY COMMITTEES. SINCE MOST CONTENT HAS A RELATIONSHIP TO THE WORK WORLD, THAT COMMITTEE COMPOSED OF STATE SUPERVISORS OF ALL THE VOCATIONAL EDUCATION SERVICE AREAS AS WELL AS ELEMENTARY, SPECIAL, AND SECONDARY PERSONNEL NOT ONLY RECOMMENDED SPECIFIC ACTIVITIES, BUT REVIEWED THE DRAFT MATERIALS AS WELL. FIELD TEST TEACHERS SPOT TESTED AND IMPROVED UPON EACH. LEARNING ACTIVITIES WERE THEN PUT INTO

USABLE FORM FOR INSTRUCTION. THE TEACHER'S GUIDE GIVES AN OVERVIEW OF A PARTICULAR LEARNING ACTIVITY THEN LISTS BEHAVIORAL OBJECTIVES, OPTIMUM TIME, MATERIALS, ORGANIZATIONAL NOTES, AND MEANS OF EVALUATION. IN THE STUDENT WORKBOOK, EACH LEARNING ACTIVITY IS PRECEDED WITH AN INTRODUCTORY PARAGRAPH, THEN A DESCRIPTION OF THE TASK/TASKS TO BE PERFORMED LISTING PURPOSE, EQUIPMENT AND MATERIALS, PREPARATION TO WORK, AND SPECIFIC STEPS. QUESTIONS FOR DISCUSSION CONCLUDE THE LEARNING ACTIVITY. BOTH TEACHER AND STUDENT MATERIALS ARE PRINTED AND BOUND IN LOOSE-LEAF NOTEBOOKS FOR EASY REPLACEMENT.

AS EACH LEARNING ACTIVITY IS COMPLETED, AN OPTICAL SCANNING FORM IS SCORED BY STUDENTS. BOYS AND GIRLS ARE ASKED FOR THEIR PERCEPTIONS AS TO READING DIFFICULTY, ORGANIZATION, USEFULNESS OF THE ACTIVITY, LENGTH OF THE ACTIVITY, WHETHER IT WAS TOO ACTIVE OR QUIET, AND, OF COURSE, THEIR INTERST IN IT. THEIR PERCEPTION OF EACH ACTIVITY AS TO ITS RELATIONSHIP TO THE SELF, MODE, CLUSTER, AND EDUCATIONAL PLANNING EMPHASIS CITED EARLIER IS ALSO SOLICITED AND IS OF SPECIAL CONCERN TO US. THE RELATIVE PROMINENCE OF EACH MODE FOR EVERY ACTIVITY IS NOTED BY STUDENTS. AND LASTLY, THE CLUSTER/CLUSTERS RELATED TO THE ACTIVITY ARE SINGLED OUT BY STUDENTS. THIS DATA WILL ENABLE US TO ENSURE COMPREHENSIVENESS IN THE END PRODUCT; THAT IS, TO BE SURE EACH MODE IS EQUALLY PRESENT AND EVERY OCCUPATIONAL CLUSTER VISIBLE.

PRIOR TO BEING HANDLED BY THE COMPUTER, ALL DATA IS CATEGORIZED BY SEX, AGE, SCHOOL, AND TEACHER, PERMITTING MORE

SOPHISTICATED STATISTICAL TREATMENT TO BE DONE IN THE FUTURE. ALL DATA IS STORED ON TAPE. INITIALLY, A PROFILE IS GENERATED OF EACH LEARNING ACTIVITY. THE INDIVIDUAL FEEDBACK DATA IS CHARTED AND BY SIMPLY NOTING IRREGULARITIES ON THE GRAPH, THE STAFF IS ALERTED TO POSSIBLE REVISIONS WHICH ARE NEEDED. THIS STUDENT-GENERATED DATA IS TEMPERED SOMEWHAT BY TEACHER EVALUATIONS WHICH ARE RETURNED FOR EACH ACTIVITY. SIMILAR ITEMS ARE NOTED CONCERNING EACH LEARNING ACTIVITY AS IN THE STUDENT EVALUATIONS. FOR EXAMPLE, STUDENT INTEREST AND INVOLVEMENT ARE SCORED; THE APPROPRIATENESS OF THE SOFTWARE AND THE MANNER IN WHICH THE ACTIVITY ITSELF WAS ORGANIZED AND PRESENTED ARE EACH COMMENTED UPON AND SCORED ON A LIKERT-TYPE SCALE. A TEACHERS' PROFILE OF EACH ACTIVITY IS THEN HAND DONE.

THUS WE HAVE TWO PROFILES OF EACH ACTIVITY UPON WHICH TO DRAW FOR POSSIBLE REVISIONS. OTHER EVALUATION INPUT HAS BEEN RECEIVED FROM THE UNIVERSITY OF TEXAS, WHICH DID A SERIES OF READABILITY TESTS ON DRAFT MATERIALS. PROCESS EVALUATION WILL BE ENRICHED WITH STRUCTURED INTERVIEWS WITH PRINCIPALS, GUIDANCE PERSONNEL, AND DIRECTORS OF INSTRUCTION LATER THIS YEAR AND THE TOTAL WILL YIELD SYSTEMATIC REVISION OF THE MATERIAL.

MEANWHILE, SEVERAL FIELD TEST TEACHERS HAVE BEEN IDENTIFIED AND APPROVED AS ADJUNCT PROFESSORS FOR VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, ENABLING US TO APPROACH THE THIRD YEAR--THE IMPLEMENTATION PHASE OF THE PROJECT--WITH SOME DEGREE OF CONFIDENCE.

A CADRE OF PEER COUNSELORS HAS ALSO BEEN BUILT WHICH CAN COMMUNICATE WITH STUDENTS IN FUTURE CLASSES OF Careers and You. THIS INITIAL GROUP OF PEER COUNSELORS RECEIVED TRAINING AT VPI EARLIER THIS YEAR. GUIDANCE PERSONNEL FROM ALL THE SITES ALSO HAVE GENERATED A SET OF GUIDELINES FOR SCHOOLS WHICH WILL BE IMPLEMENTING THE COURSE IN THE FUTURE. THE ROLE OF GUIDANCE IN THIS EXPERIENCE IS, OF COURSE, VERY PIVOTAL.

## Product Evaluation

THE THIRD YEAR OF THE CACO PROJECT WILL BE SPENT IN SEEKING TO DETERMINE THE EFFECT Careers and You HAS UPON STUDENTS, AS WELL AS IMPLEMENTING THE CURRICULUM ITSELF THROUGHOUT THE STATE. STUDENTS SHOULD, IN GENERAL, BETTER PERCEIVE THE ASSOCIATION BETWEEN PERSONALITY CHARACTERISTICS AND CAREER SELECTION, SHOULD BE ABLE TO IDENTIFY APPROPRIATE WORK MODE EXPERIENCES BOTH IN AND OUT OF SCHOOL, AND SHOULD FEEL SOMEWHAT MORE SURE OF THEMSELVES IN SELECTING CAREER-EXPLORATORY COURSES. AN ATTEMPT TO MEASURE THESE AND OTHER IDENTIFIABLE OUTCOMES WILL BE MADE DURING THE PRODUCT EVALUATION YEAR.

THE REVISED CURRICULUM WILL BE FIELD TESTED USING THE DESIGN OF AN EXPERIEMENTAL MODEL. THE MODEL WILL PROVIDE FOR ANALYSIS OF DIFFERENCES BETWEEN EXPERIMENTAL AND CONTROL CLASSES, FOR ANALYSIS OF BEGINNING TO END-OF-YEAR GROWTH, AND FOR RANDOMIZATION TO CONTROL CLASSROOM SELECTION BIAS.

THE EXPERIMENTAL RESEARCH DESIGN SUGGESTED IS SHOWN DIAGRAMATICALLY AS FOLLOWS:

| RANDOM CLASSES | 1976 PRE-TEST | 1976 1ST SEM. | 1976 MID-TEST | 1977 2ND SEM. | 1977 POST-TEST | TYPE |
|---|---|---|---|---|---|---|
| A (25% OF SAMPLE) | $O_1$ | X | $O_2$ | X | $O_3$ | EXPERIMENTAL |
| B (25% OF SAMPLE) | | X | | X | $O_4$ | EXPERIMENTAL |
| C (25% OF SAMPLE) | $O_5$ | | $O_6$ | | $O_7$ | CONTROL |
| D (25% OF SAMPLE) | | | | | $O_8$ | CONTROL |

WITH THE O'S DENOTING THE OCCURENCE OF TESTING AND THE X'S DENOTING CLASSROOM USE OF THE REVISED LEARNING ACTIVITIES, THE DESIGN PERMITS AN ANALYSIS OF DIFFERENCES BETWEEN EXPERIMENTAL AND CONTROL GROUPS. THE PRE-TEST RESULTS ($O_1$ AND $O_5$) BETWEEN A AND C WILL HELP DETERMINE IF RANDOM ASSIGNMENT OF CLASSES PROVIDED COMPARABLE GROUPS AT THE BEGINNING OF THE RESEARCH. LIKEWISE, COMPARISONS BETWEEN $O_2$ AND $O_6$ GIVE INDICATIONS OF FIRST SEMESTER GROWTH DIFFERENTIALS THAT MAY BE ATTRIBUTED TO THE ACTIVITIES. COMBINING $O_3$ AND $O_4$ AND COMPARING IT WITH THE COMBINED $O_7$ AND $O_8$ RESULTS WILL GIVE DIFFERENCES AT THE END OF THE YEAR AND PROVIDE AN EVALUATION OF THE SIGNIFICANCE OF THE DIFFERENCE EFFECTED BY THE Careers and You EXPERIENCE.

THE DESIGN ALSO TAKES ADVANTAGE OF NORMAL COGNITIVE GROWTH THAT OCCURS WITHOUT ADVANTAGE OF THE CURRICULUM ACTIVITIES. PRE-TESTS AND POST-TESTS ARE PROVIDED ON BOTH EXPERIMENTAL AND CONTROL

GROUPS TO GIVE THAT COMPARISON. BECAUSE SOME STUDENTS MAY BE ABLE TO LEARN FROM THE TEST CONTENTS, SEPARATE COMPARISONS BETWEEN $O_3$ AND $O_4$ AND BETWEEN $O_7$ AND $O_8$ WILL ALLOW LEARNING RESULTIVE FROM THE Careers and You EXPERIENCE ALONE TO BE DETERMINED. THE DESIGN MEETS THE NECESSARY ASSUMPTIONS REQUIRED FOR ANALYSIS OF THE TEST RESULTS BY BOTH ANALYSIS OF VARIANCE AND ANALYSIS OF CO-VARIANCE TECHNIQUES.

A STANDARDIZED INSTRUMENT WILL BE USED, BUT IT HAS NOT BEEN IDENTIFIED AT THIS TIME. SUPER'S Career Development Inventory IS BEING CONSIDERED.

## CONCLUSION

IN CONCLUSION, THE CACO PROJECT HAS RAISED SEVERAL INTERESTING RESEARCH POSSIBILITIES WHILE MEETING ITS CHARGE BY THE STATE DEPARTMENT OF EDUCATION. THE CONCEPTUAL FRAMEWORK BEING BASED AS IT IS UPON GLOBAL WORK MODES RATHER THAN SPECIFIC OCCUPATIONS OR SUBJECT MATTER HAS OPENED THE POSSIBILITY OF DESIGNING TOTAL EXPLORATORY COURSES FOR USE AT THE JUNIOR HIGH SCHOOL BASED UPON WORK ENVIRONMENTS RATHER THAN SUBJECT MATTER AREAS, FOR EXAMPLE, A COURSE CALLED "REALISTIC WORK MODES" RATHER THAN "INDUSTRIAL ARTS." BITS AND PIECES OF ALL CAREERS UTILIZING MECHANICAL SKILLS WOULD BE A PART OF SUCH AN EXPLORATORY EXPERIENCE--THE TASKS OF THE SURGEON, JEWELER, DENTIST, CARPENTER, ETC., NOT JUST THOSE ASSOCIATED WITH CONSTRUCTION ALONE. THIS WOULD BE, BY THE WAY, MUCH MORE IN LINE

WITH GOOD'S DEFINITION OF AN EXPLORATORY COURSE!

ANOTHER ASPECT OF THE TEACHING/LEARNING INTERACTION WHICH COULD BE PURSUED IS THE RELATIONSHIP BETWEEN WORK MODES AND TEACHING METHODOLOGY. THOSE ENVIRONMENTS IN WHICH STUDENTS FUNCTION AS PART OF THEIR LEARNING EXPERIENCE ARE ANALOGOUS TO WORK SETTINGS. BUT WHAT TEACHING METHODS PLACE STUDENTS IN WHAT WORK MODES AND HOW SHOULD STUDENTS BE MADE AWARE OF THEIR RELATIONSHIP TO WORK?

THERE ARE SEVERAL OTHER FASCINATING POSSIBILITIES RAISED BY Careers and You. AS THE DIALOGUE BETWEEN OCCUPATIONAL PSYCHOLOGISTS AND EDUCATORS CONTINUES, OTHERS WILL EMERGE. THE CACO PROJECT MERELY CONSTITUTES ONE OF MANY ATTEMPTS TO BRING CLOSER CAREER DEVELOPMENT THEORY AND EDUCATIONAL PRACTICE.